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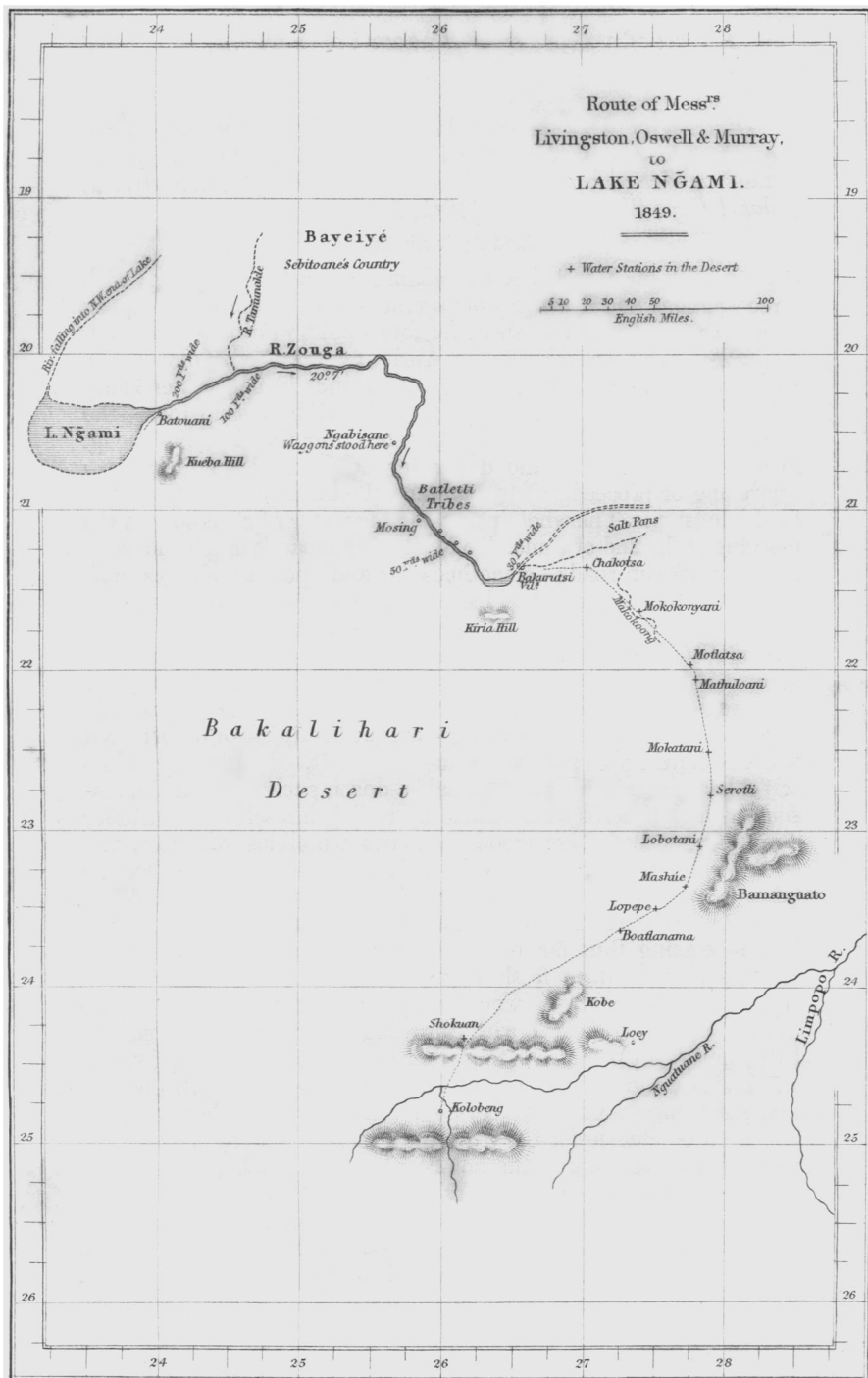
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X.—*Extract of a Letter from WILLIAM COTTON OSWELL, Esq., of the Madras Civil Service to Captain Frank Vardon, of the Madras Army, regarding the Interior Lake of South Africa, dated Cape Town, January 10th, 1850.*

[Read April 8th, 1850.]

ON the 10th of March I left Graham's Town for Kolobeng, with three waggons and five of my old servants, and, picking up horses as I went, *outspanned* at Colesberg for four weeks, waiting for Murray. *Inspanned* on his arrival (23rd of April), and reached Kolobeng on the 25th or 26th of May. The town stands in naked deformity on the side of and under a ridge of red iron sandstone—the Mission-house on a little rocky eminence over the river Kolobeng. Murray and I left it the day after our arrival, and, *trekking* (marching or proceeding) to a water called Shokuan, there halted for Livingston. The whole party left the water of Shokuan on the morning of the 2nd of June. To Mashué the road is much the same as other African roads—sometimes flat and open, sometimes bush and camel-thorn, and is besides the high road to the Bamanguato. From this we struck off at nearly N. as a general line, and journeying 40 miles over heavy sand ridges and flats sparingly covered with scrubby bushes, reached on the 3rd morning (having watered our oxen once on the way at Lobotani) a place called Serotli. I look upon this as the portal of the much-talked-of desert, and will therefore try to give you some idea of it. Imagine to yourself a heavy sandy hollow with half-a-dozen such holes or depressions as a rhinoceros would make by rolling himself as he usually does. In one of these stood about two pannikins of water, and at this spot, we were told, was the last chance of water for 70 miles (3 long days with a waggon). A quart is but short allowance for 80 oxen, 20 horses, and as many human beings. We had in coming thus far been once three days without water, but our oxen were quite fresh then, and rattled over 63 miles in style. But the natives, who busily engaged themselves immediately on their arrival with throwing out the sand from the little hollows, assured us that there was plenty of *mêtsé* (water) within. By the evening of the first day we had two pits opened, and sufficient to give the horses a bucket apiece; but as there appeared no chance for the oxen until more pits were opened (nor even *then* if the water did not flow in more quickly than it was doing), we determined to send them back 25 miles to Lobotani, to remain there until we could ascertain whether the supply could be made to equal the demand. Late on the morning of the 5th day the poor brutes reached their drinking place, having been 4 full days (96 hours) thirsting. The horses remained with us,



for we foresaw a sufficiency for them, and a deficiency of food for ourselves without them. The holes we had emptied the preceding evening were considerably fuller the next morning, and this we afterwards found invariably the case : time seemed to be required for the water to clear its way through its sandy bed. The oxen returned from Lobotani on the 5th day, after a variety of mishaps which I will tell you some day when we meet—they are not worth writing. We had a good supply of drink ready for them, and letting them have it at once, we inspanned, but, what with the heat and the sand, could make but 6 miles by sundown. The next night, with a little application of the whip, we reached a spot called Mokālāni (the camel-thorn trees). Our trocheameter told us we were 25 miles from the Serotli pits, and our guide seemed to hint that, if we went so slowly, it was a matter of doubt whether we reached the next watering place at all. It will be long if I ever forget this night at Mokālāni. We were fairly away, and no one, I really think, would have turned back for any consideration ; but the anxiety as to whether we should accomplish our intentions or not was pretty strong within *me* at all events. The want of any knowledge of the road, save that it was by repute very heavy and nearly waterless, coupled with the difficulty with which the oxen had dragged the heavy waggons through the sand on the preceding day, greatly tended to increase this, and, regarding the poor brutes as the means through which I was to gain my point, they were objects of constant care ; for I had determined, if possible, that my waggon should take me there.

After breakfast, on the 2nd day from Serotli, the horses were sent on ahead with our guide : *they* could travel faster than the oxen, and might come to water the latter would never live to see. We followed on their trail, which led for the most part through dense bush and heavy sand. Whips and screeching could get but 19 miles out of the poor beasts ; they were beginning to feel the want of water sadly, for although hardly two days without, it had been no colony travelling over hard roads, but right harassing work. 44 miles had been accomplished with *great* difficulty in 21 hours ! Murray was with the horses : Livingston and myself had remained behind. The dinner-party was not a merry one, for the members were all too well aware that the poor bellowing beasts around them could not drag on the waggons *very* much farther, and the next spring was believed to be still some 30 miles in advance. We determined to go on as long as the animals were able to work, and then send them on. Half an hour in the morning brought us to the edge of the thicket in which we had passed the night, and upon entering the hollow immediately beyond, the steeds came into view. Was it water ? No. The guide had lost his way in this pathless wilderness, and Murray very rightly had

halted at once. With the sun our guide's perceptions seemed to brighten, and he again walked confidently forward. Eight miles were hardly crawled, when the waddling gait of our oxen warned us to outspan. The natives said they would follow the little path we had been coming along, as long as it led in the right direction, in the hopes of finding what we stood so much in need of. It appeared afterwards that they had been told of a small marsh, and of this they now went in search. Breakfast was not over when one of them returned with the intelligence of a large pool close at hand. The oxen, which ten minutes before had been considered as all but exhausted, were now yoked at once. Two miles brought them to Mathuloāni. On Wednesday we had quitted Serotli—it was now Saturday. Giving our cattle Sunday's rest we again proceeded, though with no very distinct idea when we were to see water. Our guide indeed assured us that even our horses would never thirst more; that we were in the bed of a river, though *we* did not perceive it; but we knew the old fellow's notions of the distance a waggon could travel were rather vague—the marsh we had just drank at too was a godsend he never calculated on, and how far it still was to Mokokonyani (the first *certain* water from Serotli) was a mystery. For the four first days we fared well enough, finding on the 1st and 3rd a sufficient supply of rain-water, and on the 4th reaching the *first* surface-water in Mokokoong* (the river of the guide) at a place called Mokokonyani, signifying “my little brindled gnou.”

After leaving Mathuloāni we had followed the course of this said sand river, which presently became defined enough, but was to all appearance dry. It, however, yielded us an abundant supply, though not without considerable labour in the way of digging. At Lotlokani (another small spring in the Mokokoong, 3 miles from Mokokonyani) we left the river, and touching it once again on the morning of the second day left it where it spreads out into a large lagoon-like marsh now dry. Beyond this our pathfinder wandered a second time, and had I not captured a Bushwoman whom I saw skulking off in the long grass I am not quite sure we should have reached our goal so well as we did.

* These sand rivers are puzzles to me. Water has evidently, from the height of the banks, *once* flowed in them, but *when* and *why* has it ceased to do so? It still runs under the surface. Dig to a certain depth, and, as far as I know, you invariably find it: but never *on the surface*, except in a few particular spots where the limestone appears above the sand and there is a spring. The Mokokoong is but a fair specimen of a class; there are many such to the westward. The whole desert, so called, from Serotli to the Zonga, partakes of the character of its rivers, inasmuch as it has no *surface-water*, but innumerable sucking-holes, which supply the Balala and Bushmen. The Serotli pits are a good specimen of the whole. A reed is sunk two or three feet down in the sand, and the water drawn up by the mouth. I have tried it, and found it come readily and abundantly; but I shall take up small pumps next time with me.

We had been 2 full days without water, and were going in any but the right direction when I discovered her. A few beads and mortal terror induced her to confess that she knew of a spring, and offered to conduct us thither. After passing through a very thick belt of trees we came suddenly on an enormous saltpan, or rather succession of saltpans. It was evening, and the setting sun cast a blue haze over the white incrustations, making them look so much like water, that though I was within 30 yards of the edge I made sure that I had at last reached "*The Lake*," and throwing up my hat in the air, shouted till the Bushwoman and Bakuains thought I was mad. I soon discovered my mistake—many made it after me. By the side of the first pan was a small spring of very brackish water. Our oxen reached it next morning. From this point towards the W.N.W. and N.E. we could see dense columns of black smoke rising, and were assured that it was the reeds of the lake on fire! Little thought we that the lake was still some 300 miles from us. Livingston and myself had been climbing up the little hillocks in vain to get a "first view" for the last 3 days; but all doubts of seeing it eventually vanished on the 4th of July, when riding out from our night's resting place a little beyond Chakotsa to search for a path, we came upon the *real water* river (the Zougá) running, as we struck it, towards the N.E. A village was nearly opposite us, and we were naturally anxious to open a communication—the people had all made over to the other side. I tried to drive my horse through a place that looked like a drift, but got him swamped and very nearly lost him. Livingston and two of the Bakuains managed to get through, and we were gladdened on their return by the news that the water we saw came from that of which we were in search, the Great Lake. We felt all our troubles were over, and next morning, when our waggons stood on the banks of the Zougá, all anxiety for the result was at an end. We might be a long while; the natives said a moon; but we should at last see the broad water, for we had a river at our feet, and nothing to do but to follow it. I shall mention this river again presently, so I will not detain you on it now. We followed it up stream for 96 miles from the point at which we struck it, and were then told that we were still a considerable distance from the Lake. Our oxen were getting tired, and could make but short journeys with such heavy loads. Emptying my waggon, therefore, and selecting a span from the freshest, we determined to make a push for it. Leaving the other waggons and the remainder of the cattle with the greater part of the servants, we started on the 16th of July, and after 12 hard days' work arrived at the half tribe of the Bamanguato, who call themselves Batouani. We outspanned nearly abreast of the town at the lower end of the lake.

A tongue of land or an island, I could never discover which, jutting out in a peculiar way, and sand ridges prevented us from getting a fair view of the water where our waggon stood, so we mounted the horses and rode 5 or 6 miles along the bank, and then I was fully, fully satisfied, and more than repaid. One broad sheet of water lay before us. To the N.W. and W. you looked in vain for shore. To all appearance in those directions it was boundless as the ocean. Straight across, that is N.N.E. from where we were standing, the shores were, as we thought, about 14 miles apart. The eye could follow their tracery for a short distance to the N. and N.N.W. Towards the E. they continued slowly but gradually approaching each other, and contracted suddenly just at the place where the waggon stood. What was an expanse of water 8 miles across, is now just below but a moderately broad river (say 200 yards). The bank on which we stood was very flat; probably the opposite one may be so too, and therefore not visible at any great distance. Of the actual breadth I of course can form no correct notion. The canoes never *cross* it, but some coast round and along the shores. Of its extent we may perhaps arrive at an approximation from the accounts of the Batouani, who assert that a man walks 2 days (50 miles) along its bank to the S.W., 1 day (25 miles) to the N.W., and then finds the lake a river coming from the N.N.E. We were obliged to be content with hearsay, and so must you for the present.

One of the great objects of Livingston's coming up (the visiting a great chief, by name Sebitoané, supposed to live some 200 miles to the N.N.E.) was yet unaccomplished, and the season very far advanced. I determined to be Livingston's companion, taking the horses, and sending back the waggon. The fates, however, were against us: everything looked well at first, but somehow the natives got alarmed, and unfortunately the Zouga was to be crossed. We reached the proper spot for the transit, and not a canoe would show itself on the right side. Livingston tried for a whole day to make a raft; but the worm-eaten camel-thorn sank as quickly as he put it in the water. At last we gave it up till next year, when, please God, we will be more successful. We were now a long way from Kolobeng, and the season so far advanced, that we thought it better to make our way back, and leave further examination for another trip.

During the expedition some of our day's journeys were short enough, often not more than 10 miles; but the work was nevertheless hard from the thickness of the jungle and the heavy sand. In one $5\frac{1}{2}$ mile stage upwards of 100 trees were cut down, from the size of my arm to that of a blacksmith's—the distance took $6\frac{1}{2}$ hours to accomplish. Another heavy sandrise, thickly covered with bush of about $1\frac{1}{2}$ mile in extent, kept us for 2 hours. I was on this

occasion just ahead of the waggon trying to find the most practicable line, and very often could see nothing but the fore oxen's heads, and knew not by sight where the vehicle might be, till all at once I would behold it tearing its way through the thicket. A small dwarf thorn-bush also caused us no inconsiderable annoyance, tearing the noses and legs of the oxen, and preventing them from pulling together.

The Noka a Batlatli—Noka a Mampooré—N̄gami—Inghabé (for it has all these names), is situated in 20° 19' S. lat., and about 24° E. long., at an elevation above the sea of 2825 feet. The latitude you may consider correct. The longitude, in consequence of our having no watch that would go, is merely worked out by courses and distances. The height is an approximation *only* as ascertained by one of Newman's barometric thermometers.

The distance traversed from Kolobeng was 603 miles, measured by a good trocheameter. Kolobeng is about 570 miles from Colesberg, or 900 from Algoa Bay. Now that we know the "short cuts," we might perhaps make the journey in 550 miles; but we came upwards of 600. The direct course would be N.W. from Kolobeng, but there is no water for a waggon: men walk it after rains.

The Batouani have no communication with the Portuguese. The only other large tribe on the Lake, of which I learnt the name, was the Maclumma, of Damara descent I fancy. Sebitoané is said to live in one of the tributaries of the Tamunaklé, which flows into the Zouga. His country is called that of "large trees," or "many waters." He *has* communication with the Portuguese; but through another tribe, *not* direct. Don't you envy me my trip in perspective? The Sêtsé* is spoken of in particular spots; but as the chief is a kind of Moselekatsé of the west, and very rich in oxen, they cannot, I should suppose, be spread over any large tract.

A few words on the Zouga, its inhabitants, &c., &c., and I have finished. Its course is, as you see at first, nearly E., then S., S.E., N.E., and E.N.E. From two or three days from the Lake it is broad, varying from 200 to 500 yards, with flat and rather swampy shores. It then narrows and flows through high banks of limestone for 6 days—again opens out, and at its most southern point spreads into a little lake 4 miles or so across; then divides into two streams, one of which (the most southerly) is said to lose itself in the salt pans to the eastward, while by far the largest branch, on the authority of the natives, runs away N.E. and E.N.E. through the country of the Matabélé. I should mention

* The fly to which the name of *Glossina morsitans* has been recently given.—Ed.

that all this part of the banks of the river, so far as we saw it, is excessively thickly edged with high reeds, and bears evident marks of inundations. May it not take a bend S.E. and unite with the *Limpopo*? For the first 10 days the banks are very picturesque: the trees (most of them unknown to the Bakuains) magnificent for Africa: indeed the Mochuchong, one bearing an edible fruit, would be a fine specimen of arboreal beauty in any part of the world. Three enormous Morlwānahs* grow near the town of the Batouani: the largest is upwards of 70 feet in girth; but they are not common. The Palmyra is scattered here and there amongst the islands, and on the banks of the Zouga, and is abundant along the Mokokoong (the sand river of the desert). In appearance it is exactly the same as our Indian ones; but bears a smaller fruit. I have brought some down with me. A tree very like the smaller Banian of India grows on the bank of the river. The natives said it had occasionally "drops;" but I did not see any. It would seem, however, to have some kindred affinity to the Indian one; for in places where a branch had been taken and bent downwards, I noticed that it had frequently shot up again. Wild indigo is abundant in places. The Makalakka or Mashūna (I think them to be the same) do really make cloth, and dye it with this blue.† Don't you remember our being very sceptical on this point? They use the cotton of two kinds of bushes and one tree—the latter is of inferior quality. The Bakoba are the principal dwellers on the islands and banks of the river, though there are a few scattered Bushmen and Baharootzi kraals towards the lower end, where we struck it. The word Bakoba means slave, and is only applied to them by others, they styling themselves Bayéiyé, that is pre-eminently men. They are fine intelligent fellows, much darker and larger than, and in every respect superior to, the Bechuanas. Their language is distinct with a click; but *not* Bush. They must come from the Damara side I fancy. They are not by any means confined to the river Zouga; but "fish and float," as Livingston's letter says, in all the neighbouring waters. Their canoes are but roughly fashioned out of whole trees, and so that one end can be made to counterbalance the other, they do not care whether they are straight or not. Many of them are quite crooked. Paddling and punting are their only means of progression; sailing is unknown. They live chiefly on fish (that abomination of the southern Bechuanas), which they

* Baobab (*Adansonia digitata*) in all probability. From the Niger down to Benin, and so no doubt southward to the Tropic, where it ceases. (*Vide Saturday Magazine*, Oct. 27, 1832.)

† A specimen of this cloth was produced by Captain Vardon at the meeting of the Royal Geographical Society, together with the enormous tusks of the S. African wild hog, the flat head of the large fish, and the fly (*Sëtsé*) so dangerous to the cattle. The two latter are considered *new*.—ED.

catch with very neatly made nets, manufactured from a species of wild flax. Their float-ropes are made of a flag, and the small floats on the nets of a kind of reed with joints, so that, although one become saturated, the others still remain buoyant. I have pieces of rope, net, twine, hemp or flax, which you shall see some day. To prevent their rotting, the nets are dyed with a tan prepared from the bark of the camel-thorn. The Baharootzi have no canoes or nets, but spear fish with the assegai, standing on rafts made of bundles of reed tied together. The fish are in great abundance, and of immense size, our old Limpopo flathead among the number. The Baharootzi, Bakoba, and Bushmen have also another way of providing themselves with food, hardly so unobjectionable in my eyes. From end to end the banks of the Zouga are lined with pit-falls. Eleven of our horses fell in—one only died however; but two of the oxen managed to bury themselves—fortunately we had a few spare ones. We ourselves were all caught—the trader twice or thrice in the morning whilst searching for and opening the holes to prevent mishaps amongst the cattle. They are most artfully concealed: loose sand is sometimes thrown over the covering reeds and grass, and the impressions of animals' feet, together with their dung, placed at top. They make the game very wild. One animal falls in and alarms the whole herd. They retreat far off, and only return again to drink and flee. From the elephant to the steinbuck nothing escapes. We had hard work enough without much hunting; but I have killed some fine bull elephants. These and buffaloes are abundant—rhinoceroses and other game (except in one or two particular spots) very scarce. Hippopotami are so hunted by the Bakoba, that they hardly ever show themselves. The elephants are a distinct variety from the Limpopo ones; much lower and smaller in body (10 feet is a large bull), but with capital tusks. I saw two quabābas (straight-horned rhinoceroses)—wounded one, but did not bag him. Eight or nine '*léché*'* fell. Piet (my waggon driver) shot the first—Livingston the second—Murray the third. The horns of the *léché* are very much the same as a male waterbuck's, and his habits are precisely similar. Two other species of antelope are mentioned by the natives—one we saw; something of the koodoo kind, but lighter and smaller—the other is yet to be seen. Lions are very scarce along the river and by the lake. We never heard them but once, and at one time used occasionally to let our oxen run loose at night. The day however that my horse fell into the pitfall and died, we found there *were* such things. The trader rolled one over and I the

* The new antelope, recently discovered in South Africa, the skin of which has been forwarded to this country by Mr. Oswell, and presented to the British Museum by Captain Vardon.—ED.

other, rather disgracefully it must be allowed, from a tree; but had we been particular as to our honour, we might as well have left them alone, for we could never have seen them for the bush. I slew two others, and this was the whole of the bag, though I never missed but one chance, and that was from being greedy and trying to make too sure. The only thing like an escape I had was with the first. We had lost the road coming into Kolobeng, and, cantering along through some rocky hills to look for it, I heard a grunt behind me, and, turning round, saw a lion within 8 yards of me in full chase, head and tail up. My old hat, torn off by a tree, and a shot Parthian-wise satisfied him till I had got 50 yards ahead. I then jumped off, with the intention of loading the empty barrel, and bringing my friend to account. My foot was not clear of the stirrup when he was on me. *This* time I was on the look-out for him, and a lucky shot dropped him amongst some low bushes and masses of rock, about 15 or 20 yards from where I stood.

There is now a great point to be ascertained: namely, whether it be not possible to reach the Portuguese settlements on the Zambezi by an overland route. I hope to do something towards elucidating this, and have therefore made up my mind to leave Cape Town towards the close of the present month. I have letters of introduction to the Portuguese authorities should I happen to fall in with them, and anticipate no danger from the natives. We shall not, in all probability, reach the stations on the Zambezi, but we may be able to prove the possibility of subsequent travellers doing so. Livingston will accompany me.*

XI.—*Copies of Reports from Captain Thos. Henderson and Commander S. A. Paynter on Coal Formations in the Straits of Magellan, &c.* Communicated by the Admiralty.

[Read March 11, 1850.]

H.M. St. V. Sampson, Rio Janeiro, October 22, 1848.

1. SIR,—I HAVE the honour to acquaint you that, in compliance with orders from Rear-Admiral Hornby, I obtained at Port Famine, by the kindness of the Governor, a guide to conduct me to the veins in the neighbourhood of Punta Arenas (Sandy Bay), and having anchored there on the morning of the 8th instant, I landed with Mr. Barrowman, 2nd Engineer of the "Sampson," and proceeded to the first vein about 7 miles distant from the bay, situated

* For an account of Mr. Galton's expedition to the Lake see President's Address, p. xxxvii.—ED.